## IN THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Original)An imaging method for a multi-slice spiral CT scan, comprising:

scanning an object to be examined with reference to its absorption behavior by a rotating ray bundle moving in the direction of the axis of rotation;

collecting the measured absorption data;

filtering the measured data to reconstruct a volumetric image from the measured data; and

back-projecting the filtered data in three dimensions to generate a volumetric image of the object to be examined, the volumetric image representing absorption values obtained from the data of voxels, belonging to the volume of the object to be examined, for the radiation of the ray bundle, wherein

the filtering is performed by multiple application of a ramp filter $\boldsymbol{R}_{\tilde{t}}$ and a masking operation $\boldsymbol{M}$ to a projection image in a different sequence.

2. (Original)The method as claimed in claim 1, wherein the ramp filter $\boldsymbol{R}_{\tilde{t}}$ and the masking operation $\boldsymbol{M}$ are applied alternately.

3. (Original)The method as claimed in claim 1, wherein the filtering is carried out using the rule:

$$Y = \frac{1}{2}\left(R_{\tilde{t}}M + MR_{\tilde{t}}\right)X$$

$\boldsymbol{X}$ representing the unfiltered detector image, $R_{\bar{t}}$ representing the ramp filtering in the direction of the projection of the spiral tangent, and $\boldsymbol{M}$ representing the masking.

4. (Original)The method as claimed in claim 1, wherein a bed feed $h_k$ is used whose value satisfies the condition

$$h_k = \frac{h_{\max}}{2k+1},$$

k being a natural number with $k \geq 0$, and $h_{max}$ corresponding to the bed feed for which a surface marked out by the mask just covers the detector.

5. (Original)The method as claimed in claim 4, wherein the filtering is carried out using the rule:

$$Y = \frac{1}{2} \cdot \frac{1}{2k+1} \left( R_{\bar{t}} M_k + M_k R_{\bar{t}} \right) X$$

,

where k is the index number from the bed feed $h_k$, $\boldsymbol{Y}$ is the filtered detector image, $\boldsymbol{X}$ is the unfiltered detector image, $R_{\bar{t}}$ is the ramp filter and $\boldsymbol{M_k}$ is the mask.

6. (Original)The method as claimed in claim 1, wherein the mask is smoothed at least in its transition region by a continuous function.

7. (Original)The method as claimed in claim 6, wherein the smoothing of the originally discontinuous mask is performed in one dimension.

8. (Original)The method as claimed in claim 7, wherein the one-dimensional smoothing is performed multiply in different directions.

9. (Original)The method as claimed in claim 6, wherein the smoothing of the originally discontinuous mask is performed in two dimensions.

10. (Original)A CT unit for scanning an object to be examined, comprising:

a ray bundle emanating from at least one focus;

a detector array of planar design with a multiplicity of distributed detector elements for detecting the rays of the ray bundle, the at least one focus being adapted to move relative to the object to be examined on at least one focal track running around the object to be examined and with the detector array situated opposite thereto;

means for collecting detector data, filtering and 3D back - projecting the data, wherein the filtering is performed by multiple application of a ramp filter $\boldsymbol{R}_{\vec{t}}$ and a masking operation $\boldsymbol{M}$ to a projection image in a different sequence.

11. (Original)The CT unit as claimed in claim 10, wherein the means for filtering are implemented at least partially by at least one of a program and a program module.

12. (Original)The method as claimed in claim 2, wherein the filtering is carried out using the rule:

$$Y = \frac{1}{2}\left(R_{\vec{t}}M + MR_{\vec{t}}\right)X$$

***X*** representing the unfiltered detector image, $R_{\tilde{t}}$ representing the ramp filtering in the direction of the projection of the spiral tangent, and ***M*** representing the masking.

13. (Original)The method as claimed in claim 2, wherein a bed feed $h_k$ is used whose value satisfies the condition

$$h_k = \frac{h_{\max}}{2k+1},$$

k being a natural number with $k \geq 0$, and $h_{max}$ corresponding to the bed feed for which a surface marked out by the mask just covers the detector.

14. (Original)The method as claimed in claim 13, wherein the filtering is carried out using the rule:

$$Y = \frac{1}{2} \cdot \frac{1}{2k+1} \left( R_{\tilde{t}} M_k + M_k R_{\tilde{t}} \right) X$$

,

where k is the index number from the bed feed $h_k$, ***Y*** is the filtered detector image, ***X*** is the unfiltered detector image, $R_{\tilde{t}}$ is the ramp filter and $\boldsymbol{M_k}$ is the mask.

15. (Original)The method as claimed in claim 7, wherein the one-dimensional smoothing is performed multiply in mutually perpendicular directions.

16. (Original)An imaging device for a multi-slice spiral CT scan, comprising:

means for scanning an object to be examined with reference to its absorption behavior by a rotating ray bundle moving in the direction of the axis of rotation;

means for collecting the measured absorption data;

means for filtering the measured data to reconstruct a volumetric image from the measured data; and

means for back-projecting the filtered data in three dimensions to generate a volumetric image of the object to be examined, the volumetric image representing absorption values obtained from the data of voxels, belonging to the volume of the object to be examined, for the radiation of the ray bundle, wherein

the filtering is performed by multiple application of a ramp filter $\boldsymbol{R}_{\tilde{t}}$ and a masking operation $\boldsymbol{M}$ to a projection image in a different sequence.